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Blasius of Parma on the Activity of Sense

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I. “*Ego sum Blasius*”²

Blasius of Parma is an important thinker whose theories of mind and cognition have yet to receive the kind of attention they undoubtedly deserve. A good statement of the original views of this author can be found in the following passage from someone who wrote extensively on Blasius of Parma, Graziella Federici Vescovini:

Questa dottrina [Blasius’ philosophy of mind] implica una concezione dell’anima come forma materiale o semplice principio attivo, in cui l’operazione sensibile non è distinta sostanzialmente da quella intellettuale. (...) il *sensus agens* o capacità conoscitiva della sensazione, coincide con l’intera anima umana (...) L’anima è una unica forma naturale per la quale le virtù sensibili e intellettuali non si distinguono sostanzialmente o formalmente tra di loro.³

In this passage, Federici Vescovini points out two key topics found in Blasius and the historical context he belongs to, namely the question of the unity of the soul and the question of the agent sense. But, even for someone acquainted with these questions, the theses she attributes to Blasius on the subjects of mind and cognition are striking: Blasius holds that the soul is a material form; that the soul is an active principle that it manifests itself through its cognitive operations; that the soul’s sensory operations are not substantially distinct from the intellectual ones; and finally, that the agent sense is that power that combines and integrates the whole human soul in the process of acquiring knowledge. I take Vescovini to be right in her assessment and that scholars have failed, for the most

¹ The author would like to acknowledge the funding from the European Research Council under the ERC grant agreement n. 637747 for the project *Rationality in Perception: Transformations of Mind and Cognition 1250-1550*. I have greatly benefited from questions and comments from the audience in at the Blasius of Parma Conference in Tours.

² *Le Quaestiones de anima di Biagio Pelacani da Parma*. Florence 1974, 75.

³ In her Introduction to *Le Quaestiones de anima di Biagio Pelacani da Parma*. Florence 1974, 23. For a more elaborated account of these claims, see G. Federici Vescovini, *Le Teorie della luce e della visione ottica dal IX al XV Secolo*. Perugia 2003, 319-58.

part, to grasp the importance of this position. The aim of this paper is precisely to underscore the importance of Blasius' views by examining in detail those theses attributed to him on the nature of the soul and the process of cognition. My only corrective suggestion to Vescovini's statement is that we talk about the *activity of sense* rather than the *agent sense*, meaning that the soul is active in perception because the sensitive and intellective aspects come together in a joint operation, rather than attributing that activity to one particular power.⁴

In order to understand the significance of Blasius' position, I suggest that we start by asking two questions: first, what does it mean to talk about "activity in perception" and second, what does it mean to say that activity in perception *expresses the unity* of the sensible and intellective aspects of the human soul? The reason why it seems relevant to ask these questions is that what is most striking in Blasius' position is not the claim of ontological unity of the soul, whereby sensitive and intellective aspects are taken to be one and the same, but the use of that principle to make an epistemological claim concerning the active nature of perception. In what follows, I examine how the claim concerning the simple nature of the human soul grants its support to a theory of the activity of the soul in perception. In other words, this paper answers the following question: do certain epistemic consequences, namely the activity of the soul, follow from ontological claims, namely the unity of the soul? In order to answer this question, I focus on two works by Blasius of Parma, the *Quaestiones de anima*, especially question 8 from book I and question 4 from book II; and the *Questiones super Perspectiva Communi*.

II. The first ontological thesis: identity

The focus on these two works and the order of presentation is not arbitrary, as will soon become clear. In the *Questiones de anima* (Qa, hereafter), Blasius starts by first proving the materiality of the human soul and only then elaborates on the unity of its sensitive and intellective aspects. It is important to notice how he builds many of the arguments for the claim of the non-separable nature of the soul on the non-independence of its operations. Blasius insists that we should be wary of concluding the separability of the soul from the possibility of it realizing or executing the operations proper to it

⁴ Although the identification of the activity of sense with the agent sense (as expressing the joint operation of sense and intellect in the sensitive operations) has often been suggested by interpreters, like Vescovini, the textual evidence produced to support this association is thin at best. In fact, this is a charitable reading: I have not found in the literature any passage by Blasius that unequivocally states this identification, except in those texts whose attribution to Blasius is disputed (as in question 10 from book two of the *Quaestiones de anima* edited by Vescovini 1974, 149-56). The complete edition of the text will allow us to formulate a more qualified interpretation and thus I remain neutral to this identification. This does not, in any case, affect the significance of the theory of mind and cognition Blasius proposes, nor my reading of it. I would like to thank Joël Biard for insisting on this point.

without the body. The conditional case upon which the conclusion is built, namely that “If the soul has an operation proper to itself, it is separated from the body,” must simply be false because it is possible for the soul to both have an operation proper to itself and to be inseparable from the body.⁵ In his words,

The corollary [of the argument] is this: [from] the soul having or not having an operation proper to itself, it should not be concluded that the soul is separated or not from the body, *although it can be separable*.⁶ (emphasis added)

This is the case, he argues, independent of the fact that the soul is characterized by its activity or passivity in that same operation, which was an argument used to show that if the soul is tied to matter, by being its informing principle, it must be passive and thus not have an operation of its own. Blasius continues by showing that for an operation to be proper to a given entity, the exercise of this operation cannot depend on another, i.e. to originate in another (literally, be “from another,” *ab alio*). This “other” can be either another faculty, if we are focusing on the power of the intellect, or another entity like the body, or even another element of the cognitive process, like a representation of the object to be known.

Focusing on the intellect, Blasius notes that there is an important distinction between the habitual and the actual operations of the intellective soul. Let us consider the case of habitual operations first: is the soul able to perform these without being dependent on the body? Although it seems that the intellect is able to consider truths it has in itself, to freely judge and speculate about them, Blasius remarks that these operations are nevertheless instantiated in matter because the intellect exists in an embodied condition.⁷ So, in what concerns habitual cognition, the intellect depends on the body. As for actual operations, which require the presence of the object to be realized, Blasius notes that the thing needs to be the concurrent cause of that particular cognitive act, if *that*

⁵ “Unde, sicut dicebatur in una propositione, possibile est quod anima habeat operationem propriam et nunquam separetur a corpore.”, Qa I.8, 62.

⁶ “Corollarium per hoc, quod est: animam habere operationem propriam vel non habere, non potest concludi quod anima separabitur a corpore vel non separabitur, licet bene sit separabilis,” Qa I.8, 62.

⁷ “Ultima conclusio, quod intellectus humanus in eius actuali operatione utatur organo corporeo non potest reprobari,” Qa III.2, 128. An argument against the necessity of the intellect being immaterial in order to think universally is already presented by John Buridan in *De anima* III.8: see J. Zupko, *John Buridan’s Philosophy of Mind: An Edition and Translation of Book III of his “Questions on Aristotle’s De anima” (Third Redaction), with Commentary and Critical and Interpretative Essays*. Ph.D. dissertation, Cornell University 1989.

act is to be about *that* thing.⁸ To claim otherwise would be to say that the soul has, prior to any cognitive act, the species of all things there are, so that it would be able to know *that* simply by looking inside itself to that pool of cognitive resources. His answer is illustrative:

First, no rose existing, you cognize no rose. This is proved because it follows that, [if] you cognize a rose, the rose is cognized by you; therefore, it follows that the rose is cognized by you. I ask, thus, whether the subject of this proposition stands for something or for nothing. If [it stands] for nothing, you know nothing by means of this proposition: ‘the rose is cognized by you’. If [it stands] for something, I ask what that something is; it either is something or nothing [at all]; and if [it is] something, it is clear that it is nothing but a rose. This however contradicts what has been granted, [i.e.] that if there is nothing, you cognize nothing.⁹

The answer is to show that the soul can know a thing, even if that thing goes out of existence, by means of species representing that thing; but for that to be the case, the representing species must be received, processed, and retained by the soul. This reception, however, requires the body. Thus, Blasius argument is that one must accept that, for the intellect to exercise its cognitive operations, it depends on another: in fact, on two others, the body and the species representing the thing.

In several places, Blasius considers the kind of arguments that would allow for the conclusion that the soul is indeed separable from the body, and even that God is capable of performing that separation and guaranteeing its existence in the disembodied state. Blasius is unequivocal in assessing the value of those arguments: he takes them to be both possible and at best probable, thus far from being evident. Above all, he takes the claim that the soul is separable as not being contrary to reason, meaning that God could make it so, but that is not to say that stating it or believing in it suffices as evidence for that to be the case (Qa I.8, 75-7). Blasius applies the same degree of skepticism to the claim that God directly and immediately creates the intellective soul: “it is possible,” he remarks, “but it is not evident”.¹⁰ His argument is that we cannot have (or, at least that *we do not have*) either experiential or other kind of proof of the truth of that proposition, although one can accept it on the

⁸ “anima intellectiva nulla cognitione informata non habet operationem propriam. Probatur, quia talis indiget causante ut informante sicut odore, et requiritur praesentia obiecti causantis”, Qa I.8, 65.

⁹ “Primum: nulla rosa existente tu non intelligis rosam. Probatur, quia sequitur, tu intelligis rosam, ergo a te intelligitur rosa; ergo sequitur quod rosa intelligitur a te. Quaero, tunc, vel subiectum istius propositionis supponat pro aliquo, vel pro nullo. Si pro nullo, ergo nihil intelligis per istam propositionem, rosa intelligitur a te. Si pro aliquo, quaero quid est illud, vel illud est aliquid vel nihil; et si aliquid clarum est quod illud non est nisi rosa. Hoc autem repugnat casui concessio, si nihil habetur quod nihil intelligis,” Qa I.8, 68.

¹⁰ “quod anima intellective hominis sit a deo create, est possibile, sed non evidens.”, Qa I.8, 77

basis of authority.¹¹ But, he further notices that what is accepted on the basis of authority rather than evidence, especially of the natural kind, cannot be considered proper knowledge and thus falls outside the scope of the interests and expertise of the natural philosopher. If, on the other hand, we take natural evidence as proof, we do know that

nothing prohibits that matter [i.e. the body], disposed by natural pure [celestial elements], receives the form which has the power to discern, syllogize, etc., and which is called intellective [soul] by the common people.¹²

From this statement, we are left to conclude that all sorts of things can come into being as the result of the influence of celestial bodies on the sub-lunar ones, namely things that traditionally, and on the basis of faith and authority, have been thought to be directly created by God, like the intellective soul. For Blasius, however, the human intellective soul is educed from the potency of matter.¹³ He further denies that this requires the existence in matter of certain preparatory dispositions of a substantial kind, like the nutritive and sensitive soul in the plurality of forms tradition. But, he does accept the existence in matter of dispositions of a qualitative sort that prepare this process of educating.¹⁴ To some extent, however, this last aspect is a detail of the really significant philosophical position Blasius defends here, namely that the human intellective soul is educed from matter just like any other material form and thus that it does not have any particular claim to spirituality and separability—both in being and in operation.

The consequences of this fully naturalistic view are clear: the human soul is a material and extended entity, just like that of any non-rational animal, such as a donkey (Blasius' own example). Likewise, it has no proper, i.e. independent, operation apart from the body in which it exists. In a stronger sense than any medieval hylemorphic model, for Blasius the operations of the soul are also operations of the body, for instance the function of thinking requires the use of phantasms which, in turn, cannot be found without the body. In this context, it makes no sense to say that the intellective soul does not override, direct, control or even resist the sensitive soul because it is *in being and in operation* one with it. To say that it exercises different operations in different parts of the body means

¹¹ “quaero, igitur, an aliqua evidentia te moveat, an sola auctoritas te compellat.”, Qa I.8, 78.

¹² “Nihil, ergo, prohibet quin materia illa, sic praeparata ex puris naturalibus, non recipiat formam quae habebit virtutem discernendi, syllogizandi etc. quae a vulgaribus intellectiva nominatur,” Qa I.8, 79.

¹³ “... anima intellectiva est educta de potentia materiae,” Qa I.8, 87.

¹⁴ “et dico quod ipsa summe disponitur per qualitativas dispositiones et non per animam vegetativam vel sensitivam.”, Qa II.4, 103.

nothing in terms of what concerns what the soul is, but simply on the way it brings about its operations: it walks by means of feet and it thinks in the head and the heart (Qa I.8, 84; see, however, II.4,105). These bodily locations are required as instruments for its action *qua* material principle. Applied to sensation, Blasius makes clear that we can say that sensation is an operation of the soul or even better that it is an operation of the composite of soul and organ. The important point is that there is no basic ontological distinction within the soul that performs all these operations, whereby part or aspect, or power of it would be immaterial or body-independent, and another would be material and body-dependent for its operation because:

there is no doubt that the intellective soul is the soul that sees and the soul that hears and the nutritive soul, and this about [all] other [functions].¹⁵

This passage is a clear statement of Blasius' overarching argument according to which all psychological functions are of one and the same soul, a single *unified and material* principle of operation and being. The simplicity of the soul is the result not of the soul's immateriality, as commonly argued, but rather of the soul's material nature.¹⁶

There is one important objection that Blasius brings forth in the text against his own view, which concerns the issue of self-reflexivity. That is to say, how can the soul know itself and its acts, if it is a material entity. The basic assumption, shared by most medieval thinkers, is that self-reflexivity of the kind that allows the soul to take itself as an object of cognition is a property of what is immaterial in a proper sense. So, for instance, the senses cannot perceive their own acts, except in a very insipid manner and even the intellect, for Aristotelians at least, can only perceive its acts indirectly—by being aware that they are about certain objects. For Augustinians, on the other hand, the mind is transparent to itself, i.e. has unmediated access to itself and its acts. Blasius opts in a sense for a middle way, claiming that, on the one hand, the eye does not see itself and does not see itself seeing, but that, on the other hand, the soul does know itself and knows itself seeing. He further specifies that the seeing-itself function is located in the heart—in fact, he explicitly says that the soul knows itself seeing *by means of the heart*, but in other places Blasius seems to have a more ambivalent attitude to locating specific mental functions in particular body parts (Qa III.2, 128). In any case, for our purposes what matters is that Blasius explicitly denies that the kind of reflexivity necessary for

¹⁵ “Unde non est dubium quod anima intellectiva est anima visiva et auditiva et nutritiva et sic de aliis,” Qa I.8, 84.

¹⁶ “non potest efficaci ratione concludi quod intellectus humanus sit forma simplex et immaterialis,” Qa III.2, 128.

self-awareness is dependent on the soul being an immaterial substance. For this reason alone, Blasius makes an important contribution to the way we think about the conditions of satisfaction of the full range of cognitive operations in terms compatible with (and determined by) the human condition as embodied. Together his model offers a fully naturalistic account of cognition, the coming into being of the soul—here understood as generation rather than creation—and finally of the interaction between body and soul.

I have, until now, focused on the first part of the problem raised at the beginning of the paper, namely the ontological claim concerning the unity of the human soul. That has also allowed us to make some general conclusions regarding the way the nature of cognition is shown to be dependent on the nature of the soul: what the soul can do is determined by the nature of its being, which in this case is material and extended. The suggestion is that the way the human soul knows, both in perception and in intellectual cognition, must be very similar across the spectrum, because it is the same entity that performs all the different *kinds* of cognitive operations. As such, this offers quite a contrastive picture with respect to traditional, especially Aristotelian, theories of cognition. The question to ask next is how exactly are we to understand this in terms of the other claim made at the beginning of this paper: that at the core of this model of cognition is a particular cognitive faculty that operates at the interface of sensation and intellection. Better yet: *that it is that interface* because it is one and the same thing through and through – the same thing that senses and understands.

III. *The second ontological thesis: unity of operation*

The best way to show that there is no distinction between the sensitive and intellective souls and the need for their joint operation is to show what that distinction would look like. That at least seems to be Blasius' procedure. He asks us to consider the contrast between what we perceive and what we know, as in the case of our perception of the sun being smaller than the earth and the knowledge that the earth is bigger than the sun (so he thought). If it is the case, he argues, that these two kinds of knowledge are in opposition, they must correspond to two distinct *functions* and two distinct *kinds* of function, at that. Therefore, the powers responsible for such distinctive types of cognition must also be distinct. Further examples could show the conflict between kinds of knowledge and also powers of a different kind, like those of the will and the intellect. The underlying argument for this view is that differentiation of function necessarily introduces a plurality of powers, which in turn, if qualified as of a different kind, should introduce a multiplication of souls or aspects or parts within one and the same soul.

That is certainly not Blasius' own view, and he takes particular issue with the principle that a plurality of powers must follow from a plurality of operations. If that were the case, he goes on arguing, whatever thing is capable of multiple effects, must be constituted by a plurality of principles of operation. Let us consider the case of fire, for instance, which is able to burn—but also to dry leather (my example)—or the liquefying of certain metals (Blasius' example, Qa II.4, 91-2). It must be noted that this is a stock objection from those defending the unicity of substantial form, to which pluralists (those defending a plurality of substantial forms) often reply: the principle of distinction between *potentiae* is not merely that the production of different effects/operations requires different *potentiae*, but rather that different *potentiae* are required by operations of different *kinds*.¹⁷ Blasius himself recognizes this when he later on in the same question notes that there cannot be many substantial forms of different kinds (*diversarum rationum*: Qa II.4, 93) in one and the same living being. Blasius insists that we could but should not conclude the diversity of powers from the diversity of acts (Qa II.4, 102). It is significant that Blasius partly concedes the argument, by noting that nothing decisive can be achieved in this respect. It seems rather that he finds himself on safer ground in his argument from separation, which runs as follows.

God can make anything except what entails a logical contradiction. Let us imagine a human being that is constituted by a sensitive and an intellective soul. Let us also postulate that these two (sensitive and intellective) are different souls in a human being. Suppose now that God removes the intellective soul from that composite. The resulting being would still have a sensitive soul, meaning that it still remains an animal. The question one could ask would be: to what species does that animal belong? However, let us imagine that instead of removing the intellective soul from the composite, God removes the sensitive soul: that being would remain a human being (due to the intellective soul), but would lack, however, all capacity for sensation—exactly what characterizes an animal. Both examples seem to lead to absurdities and thus display an essential issue with the traditional model. In the face of this, Blasius argues that there must simply be *one soul* in any *one human being*, and furthermore that such a soul is an intellective one that is also responsible for the nutritive and sensitive functions.

Taken like this, the result looks very much like Thomas Aquinas' unicity theory of the human composite according to which there is only one substantial form, which is the intellective or rational soul. There is, however, one significant qualification that distinguishes the two: for Aquinas the

¹⁷ On this topic, see J.F. Silva, *Robert Kilwardby on the Human Soul. Plurality of Forms and Censorship in the Thirteenth Century*. Leiden 2012, 97-105; see also J. Biard, "Diversité des fonctions et unité de l'âme dans la psychologie aristotélicienne (XIVe-XVIe siècles)," *Vivarium* 46 (2008), 342-67.

nutritive, sensitive, and intellective are aspects of the same soul with the first two being present in the latter in a somewhat subdued or subsumed state. For Blasius, on the other hand, they are one and the same, so that the sensitive soul of a human being and that of any other non-rational animal, for example a donkey, cannot be of the same kind (*non sunt eiusdem rationis*, Qa II.4, 93). Instead of claiming that this so, Blasius argues that what makes it different in kind is that *the sensitive soul of the human being is inherently rational*, whereas that of the animal is not. Blasius argues this way because there is something *in addition* to the sensitive soul of a human being (or of the donkey) that makes it to be “of a different kind”—which would be problematic for a number of reasons. To be a human being does not mean to one composed of subsumed or “virtually contained” parts, but rather to be one in the sense of absolute simplicity in being *and in operation*: it is the intellective soul that is simultaneously the nutritive soul, not by reduction but by identity. Aquinas would never have accepted the “one in operation” thesis because he would have denied its premise: that the intellect cannot operate without the body. For Blasius, however, it is precisely that non-separability grounding the ontological identity and that ontological identity grounding the concurrent nature of the soul’s cognitive operations. If the claim seems radical, it is because it really is so, and the implications for the epistemological claim should now be evident: if the sensitive and the rational are one and the same soul (identity thesis), and the cognitive powers of the soul are one with the soul (reduction thesis), that means that it is one and the same power, as it were, that is responsible for the cognitive operations of both sensing and understanding. This much is clear, but what remains to be fleshed out is the central issue of what it means to say that they are *one and the same power*.

I propose that we tackle the issue in two moments: first, by considering question thirteenth of book two of the *Quaestiones de anima*; and, second, by turning to Blasius’ treatise on *Optics*. In the *Quaestiones* Blasius starts very promisingly by clarifying the meaning of the different terms used when discussing perception. He distinguishes between the *sensibile*, i.e. that which can be sensed, like a color or a sound; the *sensitivum*, i.e. that which does the sensing, which is the soul; *sensus*, which can stand for either the act of sensing or the soul that senses; *sentire*, the operation of the soul by means of which the animal senses; and finally, *sensatio*, which means the kind of cognition proper to the senses, that is sensation (Qa II.13, 118-19). After this terminological clarification, he goes on to present two contrasting views on the nature of sensation, as a possible answer to the question: *quae res est sentire*? According to the first alternative, sensation is a passive process characterized by the soul receiving the sensible species from the sensible thing. According to the second alternative, which Blasius seems inclined to support (in the sense that he never refutes it), sensation is an active process, best described as *the soul producing the act of sensation*. This happens by actively concurring with

the reception of the species, with the sense organ playing the passive role in two separate moments. In the first moment, the sense organ receives the species and, in a second moment, the act of sensation caused by the soul.¹⁸ The species appear in Blasius as the shorthand for visual rays extending from the object to the eye (see below), just like it is found in the model of perspectivist optics. From the point of view of this account, visual perception depends on, but is not caused by, the reception of sensible species in the bodily sense organs. This reception occasions, by constituting the necessary disposition, the action of the soul producing the act of sensation, that is to say the actual seeing of the external thing.¹⁹ That is where the text edited by Vescovini cuts off and there is no more to go on, until the much-anticipated critical edition of the whole work appears.²⁰ Nevertheless, there is an alternative route, which I suggest we take by turning to the discussion over the nature of vision and the perception of distance that we find in Blasius of Parma's optics treatise entitled *Questiones super Perspectiva Communi*.

IV. *The optics of visual perception*

In the *Questiones super Perspectiva Communi* (QP, hereafter), a commentary to John Pecham's popular optical work,²¹ Blasius defines vision as being caused by the power of sight with the concurrence of the object.²² The power is the internal principle of causation, whereas the object, rather than the species it generates, is defined as having the primary external causal role.²³ The object concurs by means of a varying intensity of the material active qualities it issues forth (QP I.6.2, 117) in the forms of rays, which are also called species.²⁴ Blasius follows Roger Bacon in stating that "every natural agent, whatever it is, acts on the recipient by means of rays", even though "rays" does not appear in Bacon as one of the many alternative names for "species".²⁵ In any case, the important and

¹⁸ "Tertia conclusio: species rerum sensibilium in actu sentiendi active concurrunt ad sensationem. (...) Quarta conclusio: anima sensitiva active concurrat ad sensationem.", Qa II.13, 121-22.

¹⁹ See, e.g., Qa II.13, 123: "Sed secundum determinationem oppositam, dico quod sentire est ipsa anima sensitiva, quatenus sensitiva est, connotando cognitionem eius de sensibili."

²⁰ For many years, Joël Biard has run a seminar in Tours dedicated to reading and discussing Blasius' *Quaestiones de anima*. I was fortunate enough to be invited to participate in this seminar and gained a much deeper understanding of both Blasius and medieval philosophy in general from this experience.

²¹ John Pecham, *Perspectiva communis*, in *John Pecham and the Science of Optics*, ed. D.C. Lindberg. Madison, Milwaukee 1970.

²² "visio est quedam cognitio causata a potentia visiva in oculo, obiecto concurrente," Blasius of Parma, *Questiones super Perspectiva Communi*, ed. G. F. Vescovini and J. Biard, Paris 2009, 71.

²³ QP I.6.2, 118. It is important to note, however, that color is not, per se, the efficient cause of visual perception, because all natural actions require efficient causation from celestial bodies, as a form of "flux" (QP I.15.2, 219).

²⁴ "isti radii visuales, quos philosophi species vocant, non sunt sicut lineae mathematicorum, sed cum latitudine et profunditate," QP I.1.4, 73. See also Qa II.13, 119.

²⁵ Roger Bacon, *De multiplicatione specierum*, in *Roger Bacon's Philosophy of Nature*, ed. and trans. D.C. Lindberg. Oxford 1983.

similar claim is that species are naturally generated by material things and representative of them.²⁶ As such, it is clear that they play an instrumental role in the perceptual process, with the object and the soul playing the primary causal roles.

Blasius has much more to say, however, about species; namely, about their nature and their relation to the object that generates them. The first thing to make clear is that, for Blasius, species are material extended entities, because they are grounded on matter and educed from the potentiality of matter (QP I.1.4, 73-4). Species represent qualities, for instance the color white. The question now is whether species have the kind of being that allows for producing the kind of change one would call alteration, for instance whereby something like a hand becomes white (*albifieri*) by being in contact with something white. Blasius denies that species, qua representative entities, have this kind of being—what he calls the “strength” or “vigor” of a primary quality; if that were the case, the same change would apply to the medium separating the object from the perceiver, thus making it equally e.g. white. Instead, he argues that they have the kind of being of a secondary quality, which means that the object does not impart its quality upon the receiving thing but instead its action (of the object via the species) perfects an existing potentiality (of the power)—what Blasius calls an “alteratione perfectiva” in the Aristotelian spirit of the *De anima* (the explicit reference is Blasius’ own: “ut scribitur secundo *De anima*”).²⁷

The only kind of change the species produces is this perfection of the receiving cognitive subject (QP I.6.2, 119). In the case of the species of color causing vision, that means for the quality in the generating thing to diffuse its representative species,²⁸ which are imperfect in being with respect to the thing they represent. The idea is simple and largely dependent on Bacon’s multiplication doctrine: the generated species are ontologically imperfect because they result from a successive generation that is dependent on the generating thing *qua cause* for its continuation in being (QP I.6.2, 119). There is an ontological causal dependence of the species on the thing it represents, and one could add, an epistemic dependence of the perceiving subject on the species: one only perceives what is given to one to perceive. This dependence relation also shows that variations of intensity throughout the medium and how action at great distance can be explained by pure naturalistic terms. It is only normal to expect that qua material entities, species tend to nonbeing (*tendent ad non esse*), meaning that they tend to progressively lose their intensity, for instance in the case of colors, by going from white to reddish to violet (*alurgum*) (QP I.14.1, 203). This ontological aspect of the species has an

²⁶ “evidens est quod species est representativa eius cuius est species,” QP I.2.1, 77.

²⁷ QP I.6.2, 119. On the same principle, see QP I.15.2, 218, and QP I.15.2, 217.

²⁸ “Et cum species tibi presentata in tali loco sit nata representare obiectum cuius est species,” QP I.14.1, 204.

important epistemological consequence: already from the point of view of what is available to us, acts of visual perception are limited to a range of actual but changing qualities thus resulting in partial rather than complete knowledge.²⁹ Commenting on the possibility that certain inherent conditions in the physiology of the eyes may contribute some distortion to our knowledge of the world, Blasius agrees that we do not have as much certainty as we could have, but that is simply how things should be.³⁰ As he sharply remarks, our knowledge is inherently limited because “no human cognition can exclude all degrees of error.”³¹

Blasius provides an illustrative example of this by pointing out the difficulty of seeing the Sun, qua luminous body, by means of the illuminated medium. The issue is whether the light in the medium prevents a perceiver from seeing the Sun, just like any species would prevent a perceiver, on this account, from perceiving the species-generating thing. Blasius’ solution is to say that a species is naturally representative of its object (the object generating it), so that it does not block the access to the thing but instead is that which makes this access possible—in the case of the distal senses, like sight. Thus, in the case of the Sun,

the light that concurs to this vision is the species of the luminous body diffused by a luminous body throughout the medium and representative in the eye of its own proper object, which is the body of the Sun.³²

Blasius’ point in denying that the species are the proper object of sight is clear enough, but the discussion over the Sun introduces another important element: by being a source of light, the Sun is to some extent always visible, even when other objects are visible. For such a case, when seeing the Moon, one sees the Sun not directly but by means of its light reflected on the surface of the Moon. The second important point is that, the more an object lies directly opposite to the perceiver, the better it is seen (literally, the stronger is our visual perception of it) because visual rays travel in straight lines (QP I.1.3, 71). The same applies to whatever object one sees under normal lightening conditions,

²⁹ “Patet etiam quod nulli dubium quod visio est qualitas gradualis, modo sicut non contingit aliquam qualitatem gradualem simul totam deperdi, sic non contingit totam adquiri. Et ita putandum est de notitia intellectuali,” QP I.14.1, 203.

³⁰ “numquam de renaturali per visum et consequenter per intellectum homo habet tantam evidentiam quanta haberi potest; et hoc est verum,” QP I.6.2, 119-20.

³¹ “... et consequenter causabitur error in intellectu de rebus naturalibus. Ad istud respondetur quod hoc argumentum concludit tantum quod numquam de re naturali per visum et consequenter per intellectum homo habet tantam evidentiam quanta haberi potest; et hoc est verum. Et sequitur corollarium ex hoc in hac forma quod nulla humana cognitio videtur omnem gradum erroris excludere,” QP I.6.2, 120.

³² “... lumen concurrans ad hanc visionem est species corporis lucidi difusa a corpore lucido per medium in oculum representativa sui proprii obiecti, quod est corpus Solis,” QP I.1.3, 70.

like a stone in broad daylight, because that which makes a stronger impression on our visual apparatus is the stone rather than the illuminating Sun. In consequence, we form a perceptual judgment about the stone, not the Sun or the illuminated medium. It is of further interest to note how Blasius frequently picks arguments from everyday experience (what he calls “experiential knowledge”: “notitia experimentalis,” QP 1.6.2, 116); that is to say, from how we perceive the world in our everyday interactions with objects in the world, rather than from the “armchair of the philosopher.”

Despite this perspectival or incomplete outlook of perception, Blasius is equally adamant that what we see is the external thing, rather than the species received in the sense organs. Likewise, he dismisses the causal impact of the species, qua visual rays, as unique causes of visual perception by noting that the reception of those species in the two eyes do not cause us to see double; that is because “the two eyes are informed by the same power of the soul that judges the object” (QP I.1.4, 73). Blasius considers in detail the arguments, common at the time, concerning where in the visual perceptual apparatus vision took place, namely in the crystallin lens of the eye (*in humore glaciali*) or at the juncture of the optical nerves (*in cruciatione nervorum optidorum*). Summarizing a lengthy scholastic discussion down to the size of a soundbite, the claim is that, if seeing takes place in the eye, then one sees one thing as two, as there are two eyes. If, on the other hand, one sees at the junction of the two optical nerves, one sees two things close to each other in the visual field – Plato and Socrates, to use Blasius’ own example—as one and the same thing. Although Blasius finds arguments for preferring the “glacial humor” (I.12.1, 180), the master claim is that the discussion over the location of the function is secondary and to some extent futile: visual perception takes place in the soul and the soul is present in both eyes (as it is everywhere in the human living body, like the two ears). This is an important claim: it is the same power that is present in the two organs (in the eyes and in the ears) *and* this is the same power that produces or makes a perceptual judgement about the external object. As such, the soul is not triggered to judge the presence of several distinct objects from the reception of a manifold of species.³³ That would only be the case if one were to take the object or its species, diffused from the object and multiplied in the sense organ, as the cause of vision; instead, Blasius argues, it is the (visual) soul (*anima visiva*) that causes the seeing.³⁴ Another way of explaining this is by distinguishing between two stages of vision: one, the reception and apprehension of the species diffused by the object and, two, the actual perceptual judgment (*iudicio*) of the object. This in turn can be further divided into “confused judgment” and “complete and perfect judgment” (QP 1.12.1, 178). Whereas stage one is caused by the soul with the contribution of the object (via the

³³ “ipsa anima per pluralitatem specierum non arguit pluralitatem et distinctionem obiectorum,” QP I.12.3, 190.

³⁴ “obiectum non est illud quod causat visionem in oculo, nec species diffuse ab ipso et multiplicata in oculum, sed est anima visiva,” QP I.12.3, 190.

species), level two is fully explainable by the soul's activity and to see, Blasius goes on to argue, is to have a complete and perfect perceptual judgment of the thing being seen.

Repeating a point that he had made clear already in the *Questiones de anima*, Blasius insists that the reception of species in the sense organs—thus, their affection—is required, but not sufficient on its own, to cause a visual perception. Adopting an expression that we find in other authors, Blasius refers to the perceptual act as the reception of the perceptual (visual) power's operation (QP I.14.1, 202). The underlying idea seems to be that as the “seat” of power and as a physical entity, the organ is receptive of both the act of the object in the form of the species and the act of the power. The whole argument is intended to, as it were, “please two masters”: to emphasise the activity of the soul while allowing the species to exert their causal power, within a limited reach. To return to the cereal analogy, the grain at the centre of the world will fail to cause the required causal effect in the perceiver at the edge of the world. In other words, it is not the case that an object's causal power (and thus the species) is able to act over no matter what expanse (QP I.1.4, 73). But the claim is stronger, as even in those cases, when such an action is felt, it is better to say that the object concurs in the production of the act of seeing as the *causa sine qua non*, rather than being the primary cause of seeing. Blasius could not be clearer as to what the definition of vision should be:

vision is a mode of cognition caused by the visual power in the eye with the concurrence of the object.³⁵

When one says that the eyes see, what we mean is the conjunction of visual power and the sense organ it informs,³⁶ thus making it clear that he still operates in the theoretical framework of medieval Aristotelianism; but at the same time, the emphasis is on the claim that the object does not cause the seeing (*non causat visionem*), so the reception of the species is not to be identified with perceiving. Further evidence for this is that there seems to be no correspondence between the intensity of the action of the species and the intensity of the cognitive act. If one is not attending, even an immoderate affection can fail to catch the attention of the soul and thus fail to be perceived (QP I.6.2, 117). The attention of the visual power (*advertentiam potentie visive*) rather than the intensity of the species is what does the explanatory work on whether x is perceived *at all*. But immoderateness also concerns the size of the object in relation to the distance from the perceiver: if the species on their own would explain perception, the species of a grain in the centre of the world would be perceived by any subject

³⁵ “visio est quedam cognitio causata a potentia visiva in oculo, obiecto concurrente,” QP I.1.3, 71.

³⁶ “Aliter possumus dicere quod visio non est nisi oculus videns, intelligendo per oculum aggregatum ex anima et organo tali, et idem dico de intellectione,” QP I.1.3, 72.

at the limit of that world. Blasius makes it clear that without the soul's turning and attending to the object being presented, there is no perception and no understanding.³⁷ He emphasises how cognitive acts are founded upon the "strength of the [soul's] inner light,"³⁸ not being entirely self-caused but having the primary cause in the soul itself and its power for knowledge.

Blasius is not satisfied, however, in granting to "the soul" the role of the cause of vision, denying that role to both the object and the species. He proceeds by specifying its mode of operation as being characterized by combining sensitive and intellective components (QP I.2.2, 78). The significance of this combination, which in fact is an identification on the basis of the materialistic ontological claims advanced earlier, can be fully grasped when we consider what is the content of perception.

V. The content of perception

Having made a number of substantial claims concerning the nature of the soul and cognition in Blasius, it is now time to show what, exactly, it means to say that the senses and intellect operate together in visual perception and what cognitive power combines those two aspects. The answer to that question is a description of what the content of human perceptual experiences consists in.

A key thought present in Blasius' theory of visual perception is that seeing is primarily about the quantitative dimensions of the thing seen, as he advocates in the following passage:

sometimes vision is taken for the species of the thing impressed in the eye. A second way of taking vision is as the general cognition of the object. A third way to understand vision is as distinct knowledge, by which we distinguish the whole from the parts and by means of this vision we understand the quantity of the thing.³⁹

So, an act of visual perception includes—and is in fact only completed—when one becomes acquainted with the quantitative features of the perceived thing. The first information one gets about something present to our visual field is its size because species are, as shown before, best described

³⁷ "ubi anima non advertat, non causatur visio nec intellectio," QP I.10.3, 162. See QP I.14.1, 204, on the non-voluntariness of cognitive acts.

³⁸ "ipsa, vigore sui luminis, fit sciens," QP I.1.3, 70.

³⁹ "aliquando capitur visio pro specie rei visibilis impressa in oculo. Secundo modo capitur pro visio pro generali cognitione ipsius obiecti. Tertio modo capitur visio pro cognitione distincta, qua distinguimus totum a partibus, per quam visionem apprehendimus rem quam sit," QP I.14.1, 201.

as visual rays. These rays, following the tradition of geometrical optics of the *perspectivi* (the followers of Alhacen's optical theory, such as Peckham, whose work Blasius is discussing), pass through the transparent illuminated medium (air or water) and are received in the surface of the eye, which is a convex lens. Without going into the details of the model, it is enough to present two of its key theses: first, of all the rays received at the surface of the eye, only those that reach the lens perpendicularly are primarily further processed. That means that, for each point of the issuing/represented object, only one such ray reaches the eye at the correct (straight) angle and thus there is no multiplication of processed rays corresponding to one and the same part of the object. Other rays received at different angles are refracted at the surface of the eye and are 'secondarily' processed, meaning that they help to fill the picture of the object, rather than to properly represent a given part. The second thesis is that, upon being received at the surface of the eye, the rays continue to a central point, where the processing takes place, so that the resulting image of the object bears a one-to-one correspondence with the external thing. All information coming from the object, in the form of species or rays, "fits" within a pyramid that has the apex at the centre of the eye and the sides on the extremes of the object perceived.⁴⁰

Thus, the perception of the size of the object is dependent on the angle of these visual rays that represent the limits of the body of the object. But, for Blasius that is not enough because the distance to an object must be known in order to properly adjudicate its size.⁴¹ He explicitly notes that the quantity of the rays (the quantity of the angle) is essential in order to understand the "how much" of the object, but this is not enough. The trouble is that the distance to an object—and distance between objects in the visual field—is not among those sensible properties that are represented by species and, thus, cannot be accounted for by the visual power alone. Instead, this requires the visual power to be assisted and directed by superior cognitive powers (QP I.16.2, 225). The first of these powers that play a role in visual perception of quantity is the power of discrimination (*virtus distinctiva*). Blasius does not elaborate much on this power, which is found elsewhere in the perspectivist tradition, namely in Alhacen, but he does significantly identify this power with the common sense of the Aristotelian tradition, the central perceptual capacity.⁴² What he does describe is that they work together (*concurrente*), so that the power of sight perceives the quantity of the angle

⁴⁰ "...res, quantumcumque magna, tantum informat de humore glaciali quantum est illud quod intercipitur inter latera pyramidis concurrentia ad angulum rectum in oculo," QP I.16.1, 224.

⁴¹ I cannot go into the details here, having done so elsewhere. Please see J. F. Silva, "Perceptual Judgment in Late Medieval Perspectivist Psychology," *Filosoficky Casopis* 2 (2017), 29-60.

⁴² QP I.16.3, 230. On the reduction of the internal senses to the common sense in Blasius, see O. Rignani, "Baigio Pelacani e il senso agente," in G. F. Vescovini, V. Sorge, and C. Vinti (eds.), *Corpo e Anima, Sensi Interni e Intelletto dai Secoli XIII-XIV ai Post-Cartesiani e Spinoziani*. Turhout 2005, 256-57. See also J. Biard, "Le système des sens dans la philosophie naturelle du XIVe siècle (Jean de Jandun, Jean Buridan, Blaise de Parme)," *Micrologus* X (2002), 335-51.

and the power of discrimination makes a judgment, inferentially (*illatione*), about the size of the object on the basis of knowledge about its distance. The knowledge about distance, on the other hand, is an operation performed by the intellect, which thus must interfere and play a role in the occurring perceptual experience.⁴³ But the knowledge resulting from this interference is not limited to distance but includes knowledge of the proportions of the body, the relation between its parts—done by means of “scanning” the object from different viewpoints (*delatione axis super visibile*, QP 1.14.1, 202)—and the relation to other objects in the visual field.⁴⁴

There are two other exceedingly important claims that Blasius makes concerning visual perception: the first is that there is no quantity that cannot be perceived.⁴⁵ The idea is that one can always find the conditions under which the perception of even the smallest quantity can be realized. This is a general claim about the inherent perceptible nature of quantity, not about the conditions under which it takes place. The second claim is that perception of quantity is always a rational process because the intellect is essential to calculate any quantity made present to a cognitive subject.⁴⁶ This is a claim about the nature of visual perception, not about the particular mechanisms that make it possible. There is, in a sense, a correspondence between the two, i.e. between the perceptibility of things from the point of view of quantity and the perceptiveness of the human rational soul, which takes that quantity as the object of its cognitive acts.

VI. Conclusion

In this article, I examined two important aspects of Blasius of Parma’s theory of the soul and cognition: the first is the advocated thesis of the ontological identity of senses and intellect. Blasius presents a string of arguments to demonstrate how the intellect is not separable from the body in its operations, which means that it operates in and through the body and thus is a material substance with the body. Once he has shown that the intellect is *one in being* with the body, he proceeds by

⁴³ “Tertia evidentia: tripliciter contingit nos habere cognitionem rei quante. Uno modo solo visu concurrente et hoc scientur per quantitatem anguli ut videbitur in questione vel secundum quod plus vel minus informabitur de humore glaciali. Secundo modo possumus cognoscere rem quanta sit per visum, virtute distinctiva concurrente, et hoc fit per angulos relatos ad distantiam secundum quod apparebit. Tertium modo possumus apprehendere rem quanta sit per visum intellectu concurrente, et hoc per modo investigamus quantitatem et proportionem corporum per lineas, per diametra et per alia ut dicitur,” QP I.16.1, 224. See also QP I.16.2, 226: “visus intellectuali iudicio concurrente, potest longitudinem radiorum comprehendere, idest distantiam in qua vel per quam visibile ab oculo distat.”

⁴⁴ “cognoscere hoc obiectum vel illud quantum sit, est cognoscere proportionem illius obiecti quanti ad quantitatem notam. (...) Sed cognoscere hoc ... est cognoscere quantum hoc sit sub relatione ipsius ad alterum notum, et hoc non est nisi cognoscere proportionem eius ad illud,” QP 1.16.1, 223.

⁴⁵ “nulla est insensibilis quantitas,” QP 1.16.2, 227.

⁴⁶ “omni quantitate data, quantumcumque magna vel parva, potest visus mediante claro intellectu per angulos cum relatione unius obiecti, vel plurium, ad distantias, quanta sit, calculare,” QP 1.16.2, 227.

demonstrating that the senses and intellect are *one in operation*: it is one and the same soul that both perceives and understands. With this “identity thesis” secured, Blasius advances his second main thesis, which concerns the soul’s “integrated mode” of operation in perception. The claim is that sense and intellect operate together producing a judgment about the object of perception. As Blasius takes, originally, the view that perception is primarily about quantity, the concurrent operations of sensory and intellectual powers produces this judgment about the object’s quantitative features, ranging from the perception of size to relative disposition of its parts and spatial disposition in the visual field relative to other objects. The epistemological claims that Blasius is able to make about the content of perception are made possible and justified by the way he grounds them on the unity of the cognitive subject: a material soul that is free from the constraints resulting from the separation between the physical-operating and the spiritual-operating faculties (or parts). He frames the issue of how we know the external world not in terms of cooperation among powers of different kinds (be that *connexio* or *colligantia potentiarum*), but in terms of one soul that is both sensory and rational. By doing so, he also carves a special place for his non-modular, identity theory in the history of philosophy of perception.